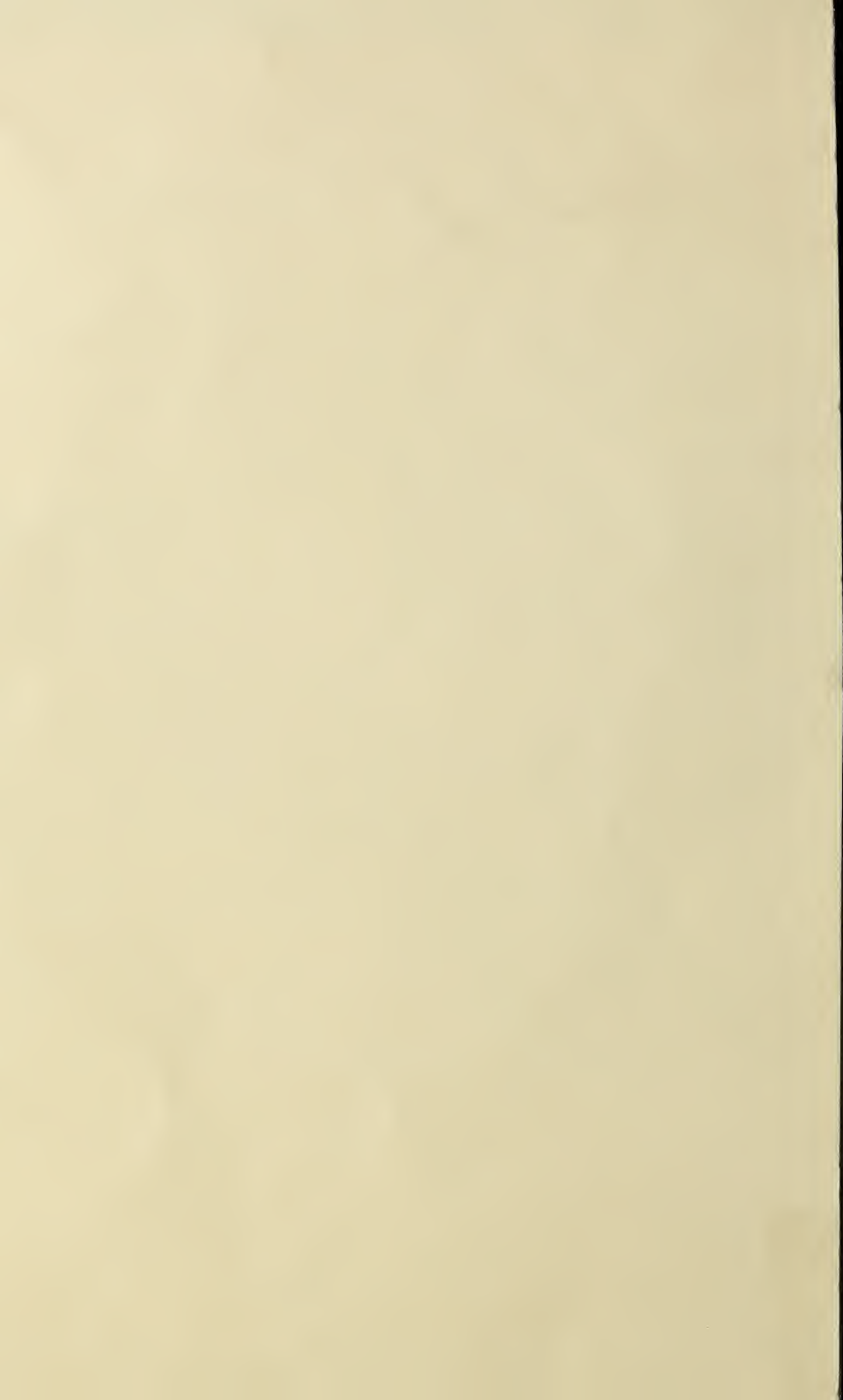
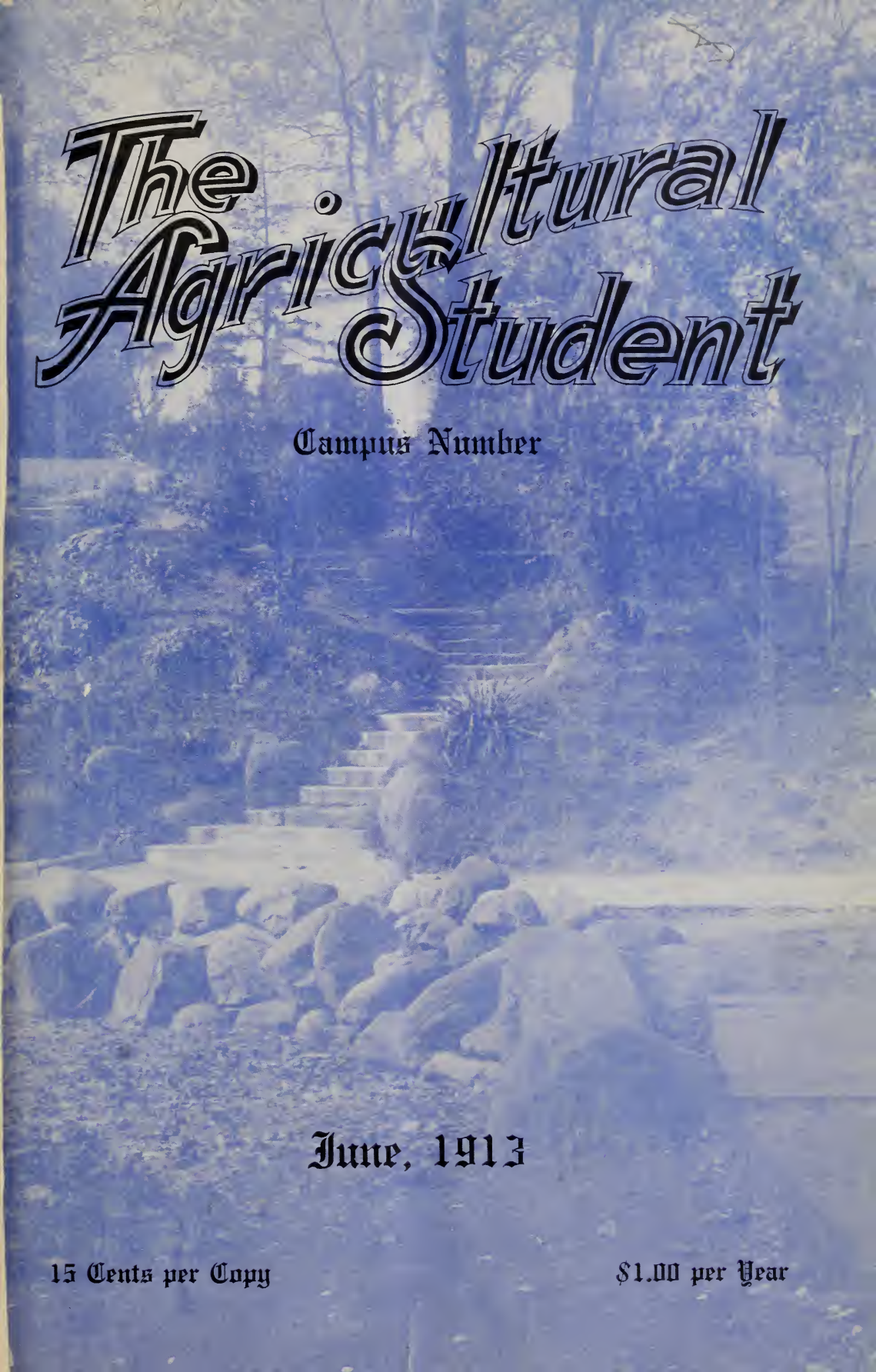


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The Agricultural Student

Campus Number

June, 1913

15 Cents per Copy

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There are Three Important Reasons Why Cows Should be Clipped:=====

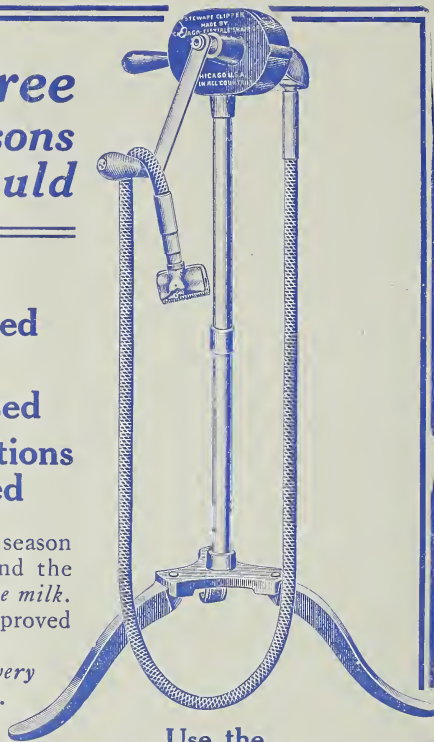
- (1st) Their Health Will be Improved
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Clip off the long coat twice a season—in the spring and summer—and the cows *keep healthier and yield more milk*. Thousands of dairy farmers have proved this.

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Results like these make clipping *profitable as well as sanitary*.

Minimize the expense, time and labor by clipping with a Stewart Machine. Anybody can operate it because it turns easy and fast, without hard work, trouble or danger to the animals.



Use the STEWART Ball-Bearing Cow Clipping Machine

The sturdy construction of the Stewart insures a lifetime of good service. Gears are file hard, cut from the solid steel bar and are encased in an oil bath away from dust and dirt. Friction and wear are practically done away with. The clipper plates are specially hardened, tempered and ground to a fine cutting edge that stay sharp long and always cut keen.

Six feet of flexible shaft, and everything necessary to begin clipping with, is included with the machine.

No extras at all and the machine as it comes is right for clipping horses, cows or mules.

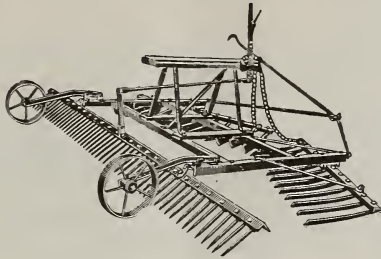
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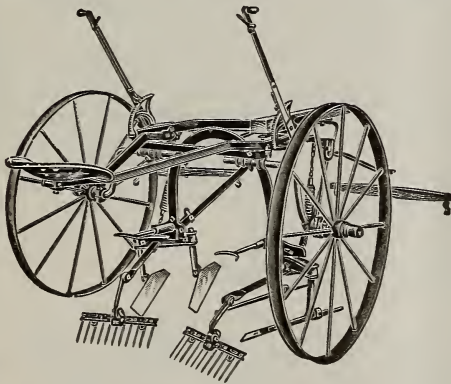
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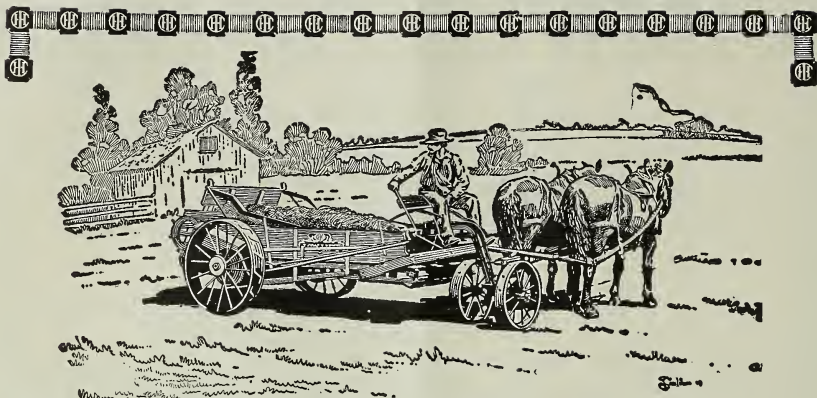
Also Chester Yarnell, a 17-year-old boy of St. James, Minn., to win his prize over 1,300 competitors with 102 bushels and 58 pounds.

Write us for their statements as to how they did it.

Be sure your new cultivator has TOWER on the tongue.

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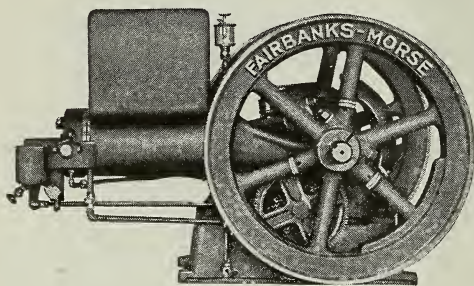
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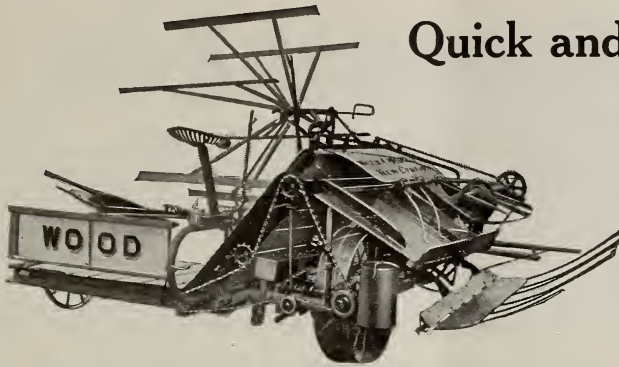
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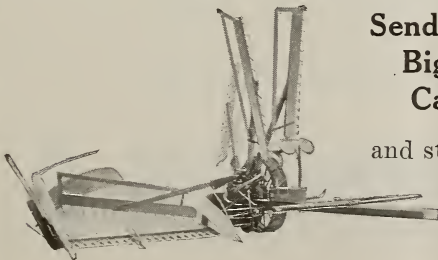
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THE NEW LIBRARY.

THE AGRICULTURAL STUDENT

Vol. XIX.

OHIO STATE UNIVERSITY, COLUMBUS, JUNE, 1913

Number 10

Campus Conservation

PROFESSOR J. N. BRADFORD
University Architect

THE object of this movement has been confused with Campus Improvement. The latter, including buildings, their architecture, location and equipment and their surrounding walks, drives and planting, is a work carried on under the direction and approval of the Board of Trustees.

The Campus Conservation movement originated for the preservation of the Campus improvements and beautification. To this end an organization under the name of the Campus Conservation Congress has been perfected consisting of one delegate from each university organization.

This Congress will formulate a plan whereby a spirit of pride will be developed, among our University population, in the appearance of the Campus, which it is hoped will become a treasured tradition.

This conservation spirit will guard against the tramping of unsightly paths across the grass and the littering of paper on the Campus or in and about the buildings, thus adding to the beautification, cleanliness and attractiveness of the University grounds and buildings.

Only a small effort on the part of each individual will be necessary to attain grand results. The present numerous, unnecessary and unsightly paths across the grass in every imaginary direction is more the result of thoughtlessness than intentional action.

There is no intention whatever of forbidding anyone from walking on the grass, only the request to prevent tramping paths across the grass and littering it with rubbish of any kind.

The permanent plan for the future Campus improvements is being developed, the general scheme of which is shown on the accompanying illustration. By referring to this map, showing only building locations, walks and drives, it will be evident that in place of the present indiscriminate informality with its innumerable unsightly past, and orderly, direct and formalized arrangement is planned. The walks and drives will be constructed of a permanent material free from dust and mud and of ample width to accommodate the traffic.

With the exception of the Botany and Zoology Building all of the social and residential buildings are grouped on the south side of the Campus. The valley running east and west past the lake and spring forms a natural division between the instructional and residential buildings of the University and it is to be regretted that the Botany and Zoology Building will be out of the instructional group.

The Engineering group will be arranged in an axis north of the Chemistry building while the Agricultural and Veterinary buildings will be grouped on the west side of the Campus along the Neil Avenue drive.

The Library, common to the work of

the whole University, is very fortunately located as central as the grouping of buildings will permit and forms the crowning architectural climax on the main east and west Campus axis.

While this plan formalizes the Campus, thereby reflecting the orderly, systematic organization of the University there are spots which will always remain informal and in a way satisfy those strongly attached to informal landscape architecture, for example the vicinity of Mirror Lake. This part of the Campus is naturally picturesque and must be preserved entirely free from formal encroachments.

To the west of Neil Avenue drive in the low ground and on the steep banks, permitting a variety of planting will be the new Botanic Garden, beautifying this neglected spot.

Along the drives and walks will be placed numerous cluster light standards which will add to the attractiveness and convenience of the Campus after nightfall. This improvement will be greatly appreciated by all especially during the short days of winter.

The planting of trees and shrubs will be an important part of the Campus beautification, constituting the adorn-

ment of its formal lines with nature's art.

Displeasing views will be "planted out" and pleasing ones enhanced by "planting in." In this part of the work the services of the botanist, horticulturalist and forester will assist the architect and produce a result free from a "one man plan."

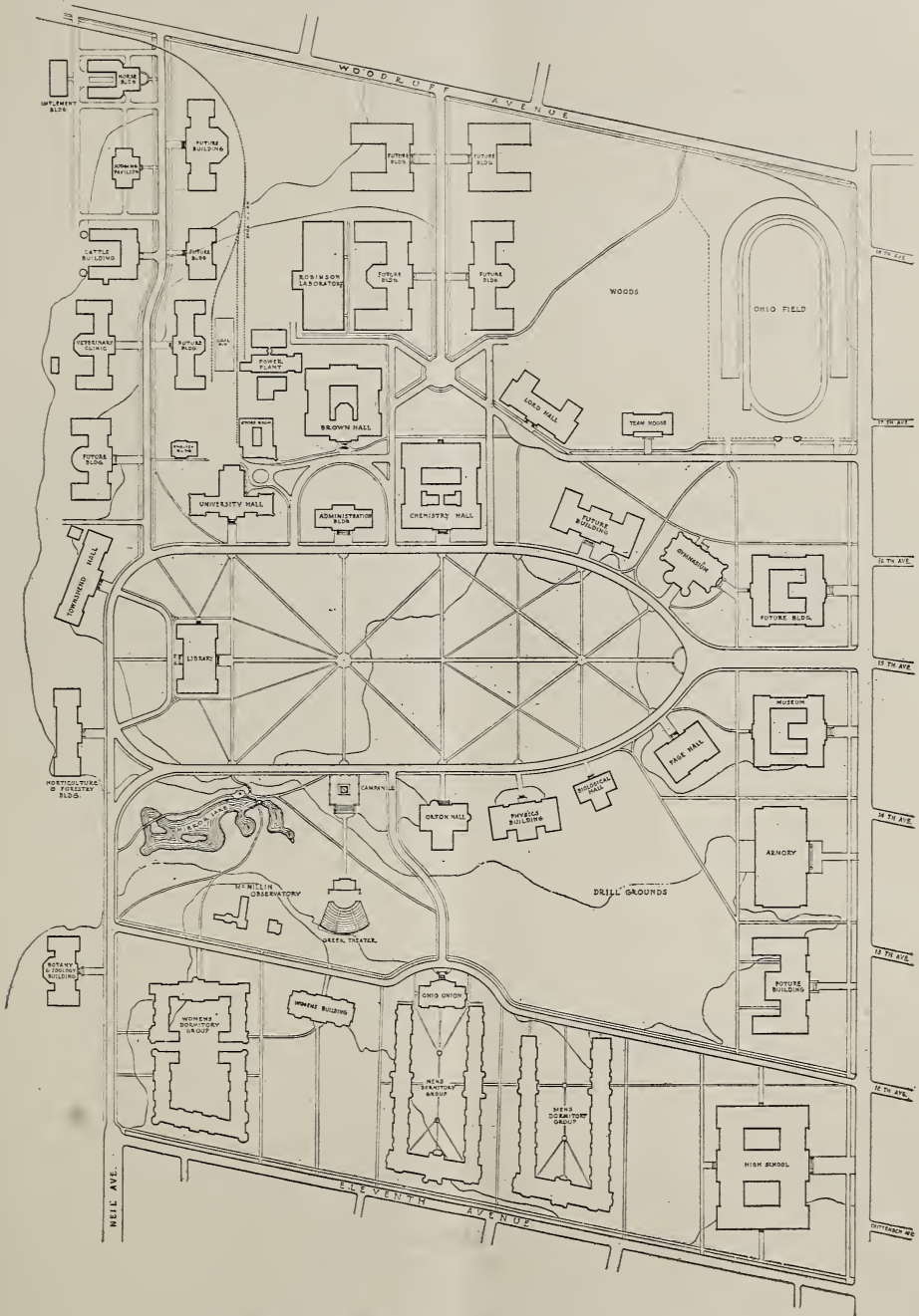
It must be admitted that however much the beautification of the Campus may appeal to the designer's imagination the utilitarian considerations can not be ignored without resulting in an artistic and practical failure.

Buildings and the means to get to and from them must be considered of primary importance with the landscape work an accessory.

With all this planning, building and planting to develop the Campus beautiful, the results will be far from a success unless a true spirit pride in this beautification can be instilled into our students and instructors.

To this end the efforts of the Conservation Congress will be directed. Let every one on the Campus willingly and enthusiastically join the movement so that we can point with pride to the "Model Campus Beautiful" at Ohio State.

When days are happiest we never know
How deep the love of friend, how kind our foe:
But when upon us falls affliction's hour,
We see true friendship and love's power.



THE NEW CAMPUS PLAN FOR THE FUTURE.

The New Horticultural Building

PROFESSOR VERNON H. DAVIS
Department of Horticulture

A BUILDING for Horticulture and Forestry is at last to be realized. The last legislature made an appropriation of \$150,000 for a Horticultural and Forestry building and \$15,000 for equipping the same. This building will place these two Departments of the Agricultural College on something like an equitable footing with the other Departments as far as housing and equipment is concerned. For years the building and equipment available for use by these Departments has been a serious reflection, not only upon the efficiency of the college as a whole, but upon the University as well. This building will serve to emphasize in a peculiar way some of the phases of Agricultural education receiving especial attention at the present time.

In the first place the college in general has been teaching the necessities for more intensive and more thorough farming methods, yet have been emphasizing what is commonly considered extensive farming. The so-called Horticultural crops lend themselves in a peculiar way to intensive cultivation, and in many locations should be grown in preference to the farm crops and will always be more profitable. With the coming of the new building an adequate equipment will for the first time be provided for proper instruction along these lines.

The spirit of conservation is everywhere manifest, yet the Department of Forestry, recognized as one of the leading lines of endeavor in this direction, will have its first opportunity for adequate expression and effective work in the new building. In no other Department of the Agricultural College will the aesthetic phase of an Ag-

ricultural education be emphasized to such an extent as in the Horticultural Department. Landscape Gardening in the sense that applies to the beautifying of home surroundings and contributing to the creation of the home beautiful as well as to the farm beautiful raises the objects and aims of an agricultural education above the mere basis of more crops per acre, of more pounds of beef per ton of food. Sordid, unsightly and unkept surroundings have had a more potent influence in driving boys and girls from the farm and destroying their interest in country life than most of us are willing to admit. It also has a more direct effect in depressing farm values than usually is thought, and upon the other hand properly kept and beautiful grounds about the home and building will add very materially to the actual value of the land of the farm. These, to my mind, are some of the things most worth while in an agricultural education for which the Horticultural and Forestry Building will stand as a kind of a monument and constant reminder.

The need for the building will become apparent when it is remembered that during the semester just ending 500 students have been receiving regular instruction in this Department, over one-half of which have been accommodated outside of the Horticultural Building. Two classes with over a hundred students each have received continuous instruction, and the problem of sufficient capacity to accommodate them has taxed the present limitations of Townshend Hall. When the problem of laboratory work for such classes is considered it will be apparent at once that the work from

both the instructor's and students standpoint must have been somewhat unsatisfactory. So much for the present conditions which are to be relieved by the new building and every one in the college, and especially in the Department of Horticulture and Forestry are forgetting their past inconveniences and looking forward with pleasure to their future work in more commodious surrounding and equipment sufficient to meet the demands of the work satisfactorily.

The new building is to stand on the site of the old one, which will be torn down during the present summer and work immediately begun on the new one if the present plan of the Board of Trustees is carried out. Plans are already practically completed for the building and it will probably be only a very short time until contracts are let and work begun. The building will be two stories high with basement, 82 feet wide and 250 feet long. The lines of construction will follow very closely those of Townshend Hall.

The building will be divided equally from the ground up between the Departments of Horticulture and Forestry, Horticulture occupying the south end. In the basement will be found a cold storage room of a capacity sufficient to carry all fruits and perishable supplies needed in instructional work and built in such a way that it may be used throughout the year for experimental purposes in connection with problems of storage. A spray room, locker rooms and laboratories occupy the remainder of the space. The second floor will contain the offices and class rooms and laboratories. The third floor will contain one large

auditorium, seating 500 persons and the remainder of the space given over to laboratories and class rooms.

In the securing of this building too much credit cannot be given Professor Paddock, Head of the Department, who has been unceasing in his efforts since coming to the University to create and crystalize a sentiment more appreciative of the needs and the opportunities of Horticultural work in Ohio.

It is a significant fact, however, that during all the years of asking and waiting a public building was not secured until the Horticultural interests of the state became sufficiently aroused to ask for and demand better equipment for instruction in the particular lines of especial interest to them. Great credit is, therefore, due the Horticultural Society and their members in that they are the organized body representing the Horticultural interests of the entire state and were especially active in securing the new building.

Deserving of especial mention in connection with the advances that are now being made possible in both the Horticultural and Forestry Departments is Professor W. R. Lazenby, the veteran instructor in both Departments before their separation and in Forestry exclusively since separation. He has spent the greater portion of his life earnestly instructing young men who were interested in these subjects under conditions which would have discouraged a fainter heart than his. The new building with all the added conveniences and greater efficiency which it applies comes in the way of a reward to him for his years of faithful service during the pioneer days of both Departments.

The New Biology Building

PROFESSOR W. G. STOVER
Department of Botany

WITH the great increase in the number of students in the University in recent years, the departments of Botany and Zoology have been badly overcrowded for some time. In fact, both departments have been holding part of their classes in other buildings. The legislature has now provided for a new building which will give room for the proper conduct of the present courses offered, and for desirable new courses which are being planned.

Work has already started on the new building, which is to stand on Neil Avenue nearly opposite Oxley Hall. It is to be of red pressed brick, and in architectural style will harmonize with its neighbor across the avenue. There will be two stories, an attic and basement, and the cost will be \$125,000.

The Zoological department will occupy the north wing, and the Botanical department the south. Here will be found the laboratories, recitation rooms, offices, store rooms and dark rooms. These will all be equipped with the latest and best appliances for the study of Zoology and Botany in their different phases.

The central portion of the building will be occupied in common by the two departments. On the first floor in this portion will be a large lecture room and directly beneath it a well-appointed aquarium. On the second floor, above the entrance, will be located a joint library with seminar rooms on either side. On the west side of this floor it is planned to have a biological museum. There is already considerable interesting museum material in the two departments which is not now adequately displayed on account of lack of room.

The aquarium in the basement will be an interesting feature. Living fishes and other water forms of life can be kept here at all times. Connected with the Zoological department, also, there will be an insectory, in which will be reared various sorts of insects for purposes of study, and an apiary in which the principles of beekeeping may be observed.

In connection with the Botanical department, there will be a greenhouse which will provide space for growing various exotic plants and much of the material necessary for class use. One room will probably be devoted to the use of students carrying on experiments in plant physiology. Another will provide facilities for the study of the principles of plant breeding. Still another will be set apart as a pathologium in which diseases of cultivated plants may be studied on their living hosts at practically all times of the year.

The hollow to the north of the building site will be converted into a pond in and upon the margin of which will be found various forms of animal and plant life not otherwise readily available. To the west of the building will be laid out a botanical garden and arboretum.

With the additional facilities provided in this building, the courses already offered can be made more effective. New lines of research in animal and plant genetics and in plant pathology are made possible, and new courses in applied entomology, fungous diseases of plants and dendrology are being planned. In every way, both the departments can be of greater service to the University and to the State.

The Botanic Garden and Arboretum

FOREST BROWN
Florist

THE valley in which Mirror Lake is situated, continues west of Neil Avenue toward the Olentangy River. This west portion of the valley affords a favorable site for the development of a Botanic Garden and Arboretum.

In brief, the west portion is to be developed as an arboretum. Two small lakes are to be formed near the building. Each one is to be planted with aquatic plants, both native and tropical. Among the water lilies, the *Victoria regia* will be grown, the leaves of which float upon the surface of the water and are often large enough to support the weight of a person. The shaded north slopes are to have *Rhododendrons* and other plants mainly of a shrubby nature. An experimental garden will be started as soon as possible, which is to be enclosed so that careful experimental work may be conducted without danger of interference. As opportunity affords, collections of plants of special interest will be set aside in different divisions of the garden.

As soon as conditions are suitable for the propagation of seedlings, a collection of standard seeds of native Ohio plants will be made and offered for exchange, in the form of an Exchange Seed List to be revised and published each year. In this way the garden will be able to secure seed and plants from the numerous botanic gar-

dens in the United States and abroad. There is scarcely any country which does not possess at least one well organized botanic garden for educational purposes. Most of these are in connection with Universities. There are at least three hundred botanic gardens of this kind, representing various portions of the earth, each of which offers in return a similar seed exchange list. It is thus seen how convenient a means this affords for securing plants, not only of geographic interest, but of systematic, physiological, plant breeding, medicinal and other fields of study. It is thus seen that the Exchange Seed List is a prominent feature in the conduction of a botanic garden.

The garden is to be open to the public, and a driveway will lead from Neil Avenue over the garden in such a way that a good general view of the trees, shrubs and other plants may be had by following the roadway. Also, a number of foot paths will be constructed by means of which one may inspect the various collections more closely.

It is noteworthy that Dr. Kellerman started a botanic garden on this site a number of years ago; but his plans were so seriously interfered with by the cattle and other animals pasturing here that the scheme was at length abandoned. The need of an efficient botanic garden is more strongly felt by the University.

Remember "Ohio State Day"
at the State Fair

Agricultural Graduates and the Home Church

REV. WILLIAM HOUSTON
Pastor Presbyterian Church at Ohio State

THE field, the forest and the farm show new opportunities to the student on his return. He has lived for a longer or a shorter period in an intellectual atmosphere charged with enthusiasm for doing things. There is no failure in ideal farming when the legislature pays the bills. The examinations have been taken. The student is back home. The old gray mare, with scant recognition of past familiarity, has

show signs of being unkempt, uncared for and unloved. The services inside resemble the conditions outside—both run down and neglected. Half a dozen men from the neighborhood in half a day could fix the fence, clean the church building, rid up the yard, plant the flowers and show the passer-by that here was a church in the open country well kept and inviting.

The Bible School—my me! There are



“MAY THE CHURCH SERVE TO LINK RELIGION AND AGRICULTURE.”

hailed the little trunk packed with a much-worn uniform, a large college banner and numerous photographs of one girl, back home. Father is hopeful. Mother is sure.

There is the old church building. It does not seem as imposing as in the old days. There is evidence that it was painted once. Weeds are luxuriant. Hitching posts are few, a broken window, a battered door, a delapidated wood shed, much dust everywhere

no supplies. The music! Would you listen. Make it better. Attend and get in a class, sing, teach, superintend, ring the bell, sweep out, be willing to help anywhere. The sermon and the service of worship make valuable. Of course, you can. Ask for special subjects to be discussed. Suggest texts. Mention the ones that are interesting. Beat the bushes for an audience, advertise, use the telephone, boost the church, and help the preacher. Help every one who

is a pusher. Get back of the preacher's enterprises and let him know that you are with him in every good word and work. An expectant and sympathetic audience can tone up a poor preacher until he is eloquent, while a cynical and critical audience would make Billy Sunday tiresome. Help the church along back home.

The church building and the school house are the natural social centers. "Something doing every week," makes a good slogan. Box socials, singing schools, spelling matches, story-telling, parties, picnics, sane Fourth, conventions, institutes, a good time all the time back home.

Better people want better roads. Better roads make better farms, better farms and better people produce larger crops, better horses, cattle, sheep and people. These desirable conditions

will bring back home many farmers who are trying to live on a city lot so narrow they can spit across.

Local politics are for you. Vote every time there is the chance and vote for men that you believe can fill the offices best. Become interested in the primaries. Kick the man off the place that offers to pay you for time lost in going to vote and thereby set a good example for your neighbors. There is a place prepared for bribe givers and bribe takers. Furnish a ticket for those who live back home.

Can't? Try. Of course, you can. If you have not developed the spirit of leadership, do it now. Forget your discouragement. Remember your purpose is to have the best neighborhood back home. Do it and in a few years it will show to the people back home what it meant for you to have been a student at Ohio State.



LET THE HOME AND THE CHURCH CO-OPERATE.

Keeping Bees

PROFESSOR JAS. S. HINE
Entomologist

At the meeting of the Ohio State Beekeepers' Association at Townshend Hall the past winter, the statement was made by an experienced Apiarist that bees should be kept much more generally, on the farms of the state, than

the proper pollination of fruit and other blossoms. There appears to be no reason for doubting that yields of fruits and some other crops would be increased if bees were more generally distributed.



"QUEENS AND QUEENS."

they are at the present time. There are at least two evident reasons why this should be so. Honey is a wholesome article of food and a great many of our people do not have it unless they produce it themselves. Again, bees have been proven a necessity for

There are a number of Ohio beekeepers who are engaged in the business as a commercial profession. By study and investigation they are able to use methods, which produce best results and from their standpoint beekeeping pays. No class of men engaged in any profession is more willing than beekeepers to impart their knowledge to others. This information regarding up to date methods used in handling bees is very easy to obtain, and any one with the inclination can fit himself for the work.

It would seem that there should be in Ohio large numbers of individuals anxious to keep a few colonies of bees, not necessarily from a commercial standpoint alone, but to produce honey for their own use and to secure the service of these insects in the pollination of blossoms.

Many would not dispense with bees because they have formed an attraction for them and because they feel that their premises are incomplete without them. It is always pleasing to visit a place where the owner produces an abundant supply of many things for home consumption.

Oh, for boyhood's time of June,
Crowding years in one brief moon,
When all things I heard or saw,
Me, their master, waited for.

Silage and Concrete Silos

THE principal source of profit in dairying, stock-raising, and farming lies in improving the quality and at the same time keeping down the cost of production. In this matter of profit and loss nothing plays such an important part as the question of feeds and feeding. The natural feed for animals, the one on which they do best, is green pasture. In climates subject to frost, man has made the same provision for animals as for himself by providing them in winter with canned green fodder called "silage." Silage is made most commonly from corn, cow peas, clover, sorghum, or alfalfa, merely chopped fine and stored in large water-tight cans known as "silos." In dry weather or in winter, when green pasture cannot be had, this feed is equally good in producing a flow of milk or in putting fat on animals. One acre of a crop harvested as silage will feed twice as much stock as the same amount harvested in any other manner.

Like a glass fruit jar, a silo must be water-tight and jointless to keep the silage from moulding or "dry firing," for this reason, and also because no painting or repairing is ever necessary, solid-wall concrete silos are coming into general use.

Selecting the Size of the Silo.

The best silos are built circular in shape. The size depends upon how many animals are to be fed daily, the quantity in pounds for each animal's daily feed, and the number of days it may be necessary to feed them. The silo should be of such size that a layer of silage at least 2 inches in depth will be removed each day after feeding has begun. This prevents a thin top layer from moulding. A dairy cow requires about 40 pounds of silage per day, and

the following table is based on this amount. Forty pounds is also the average weight of a cubic foot of silage.

DIMENSIONS OF SILO ACCORDING TO SIZE OF HERD.

Number of Cows in Herd.	Feed for 180 Days.			
	Estimated Tonnage of Silage Consumed—Tons.	Size of Silo.		Corn Acreage Required at 15 Tons to Acre—Acres.
		Diameter—Feet.	Height—Feet.	
10	36	10	25	2½
12	43	10	28	3
15	54	11	29	4
20	72	12	32	5
25	90	13	33	6
30	108	14	34	7½
35	126	15	34	8½
40	144	16	35	10
45	162	16	37	11
50	180	17	37	12
60	216	18	39	14½
70	252	19	40	17

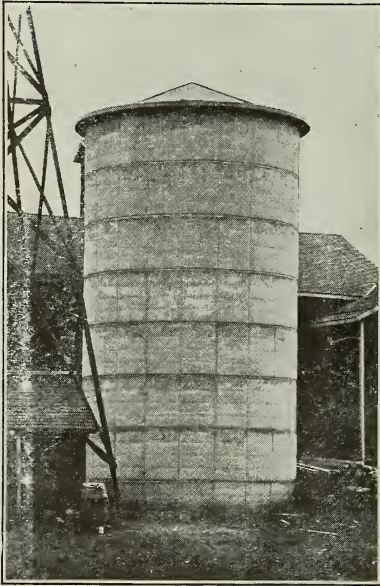
It is frequently advisable to cut down the average daily ration or to use silage together with other feeds. With this thought in mind, and especially for dry weather feeding in summer, many farmers find it best to build two silos of moderate size instead of one large structure.

Location and Foundation.

Locate the silo where it will be convenient for feeding. Usually it is joined to the barn by means of a chute and passageway with doors. Since the silo and its contents are heavy, it must be built on solid ground. The bottom of the foundation should go below frost line. The silo may, with advantage, extend 4 or 5 feet into the ground. Dig the pit large enough to allow for the thickness of the circular walls and a footing 2 feet wide.

Making the Forms.

In order to save lumber the concrete is poured into forms which can be moved up as the concrete sets or becomes hard. These movable forms consist of two circular shells 3 to 4 feet high, so made that one fits within the other with space between for a 6-inch wall. The horizontal framework consists of two by four-inch timbers cut to circle, which are covered with sheet metal or wooden lagging. Each piece must be long enough to provide for a 6-foot 3-

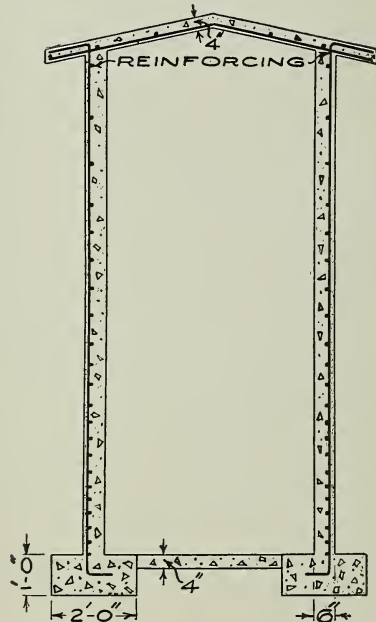


SOLID CONCRETE SILO WITH CONCRETE ROOF.

or bank-run gravel may be used instead of the sand and the rock. Measure all materials on the basis that 1 bag of cement equals 1 cubic foot. Many persons raise the concrete in buckets, but the work can be done more quickly and easily by using a horse together with a derrick or a well braced jib-boom fixed to an adjoining building.

Building the Silo.

The finished silo shown above is 15 feet in diameter (inside) and 36 feet high, of which 4 feet is below ground.



CROSS SECTION OF CONCRETE SILO.

inch length of the circumference of the circle as well as several inches for the lap or strap joints. The forms are raised by loosening them at the joints and setting them up again on the finished section of the silo.

Mixing and Placing the Concrete.

Concrete for silos should be rich in Portland cement and should be put into the forms mushy wet. Mix it 1 part cement and 2 parts sand to 4 parts crushed rock. Four parts of clean pit

At odd times all of the materials were hauled, so that there would be no delay when the work started. After the pit was dug to solid clay, the concrete footings (2 feet wide and 1 foot thick) were placed and a 4-inch concrete floor was laid upon the natural clay bottom. The next day the forms were set up, the reinforcements placed, and the walls begun. These forms were 4 feet high and were made in eight sections 6 feet 3 inches long.

Since silage contains so much water, steel rods are necessary as reinforcement to withstand the pressure. To get the best results, this reinforcing should be placed exactly $1\frac{1}{2}$ inches from the outside of the silo wall. Rods $\frac{3}{8}$ -inch in diameter and 10 feet long were used. The vertical rods were spaced 18 inches apart. Measuring down from the top of the silo, the horizontal rods were spaced as shown in the tables below.

SPACING OF HORIZONTAL REINFORCEMENT.

Feet distant from top... Spacing in inches	40-35	35-30	30-25	25-20	20-15	15-10	10-0
	6	7	8	10	12	15	18

The horizontal rods were carefully made into solid hoops by bending the ends so as to hook together. They were also wired to the inside of the vertical rods. (Complete plans for silos may be obtained free from any Portland cement company.) Two extra lengths were placed in the concrete $1\frac{1}{2}$ inches above the door openings for removing the silage. These openings were made by a removable form (also cut to circle), which fitted snugly between the molds for the silo walls.

The silo forms were filled with concrete and allowed to stand over night. The next morning they were loosened, raised and again filled. These operations were repeated daily until the side walls were finished.

With a 4-inch concrete roof, the silo is entirely fire and repair-proof. The roof was built on a temporary wooden roof, which was entirely removed after three weeks. The concrete roof is cone-shaped with a rise in the center of 2 feet and a dip or overhanging of 1 foot. One inch from the under side, this roof is reinforced with $\frac{3}{8}$ -inch rods laid like the spokes of a wheel and

spaced 18 inches at the rim. Every other rod reached only half-way to the peak of the roof. To hold the spokes in position so that the concrete could be forced between them and the temporary wooden roof, one ring of $\frac{3}{8}$ -inch rods was wired to this reinforcing just over the side walls and another half-way to the peak. These rods strengthen the roof greatly and must not be left out. Water-soaked weather boards were used to form the circular edge of the roof. An opening for the blower tube from the cutter was formed in the silo roof in the same manner as the doors in the side walls.

The Cost of Concrete Silos.

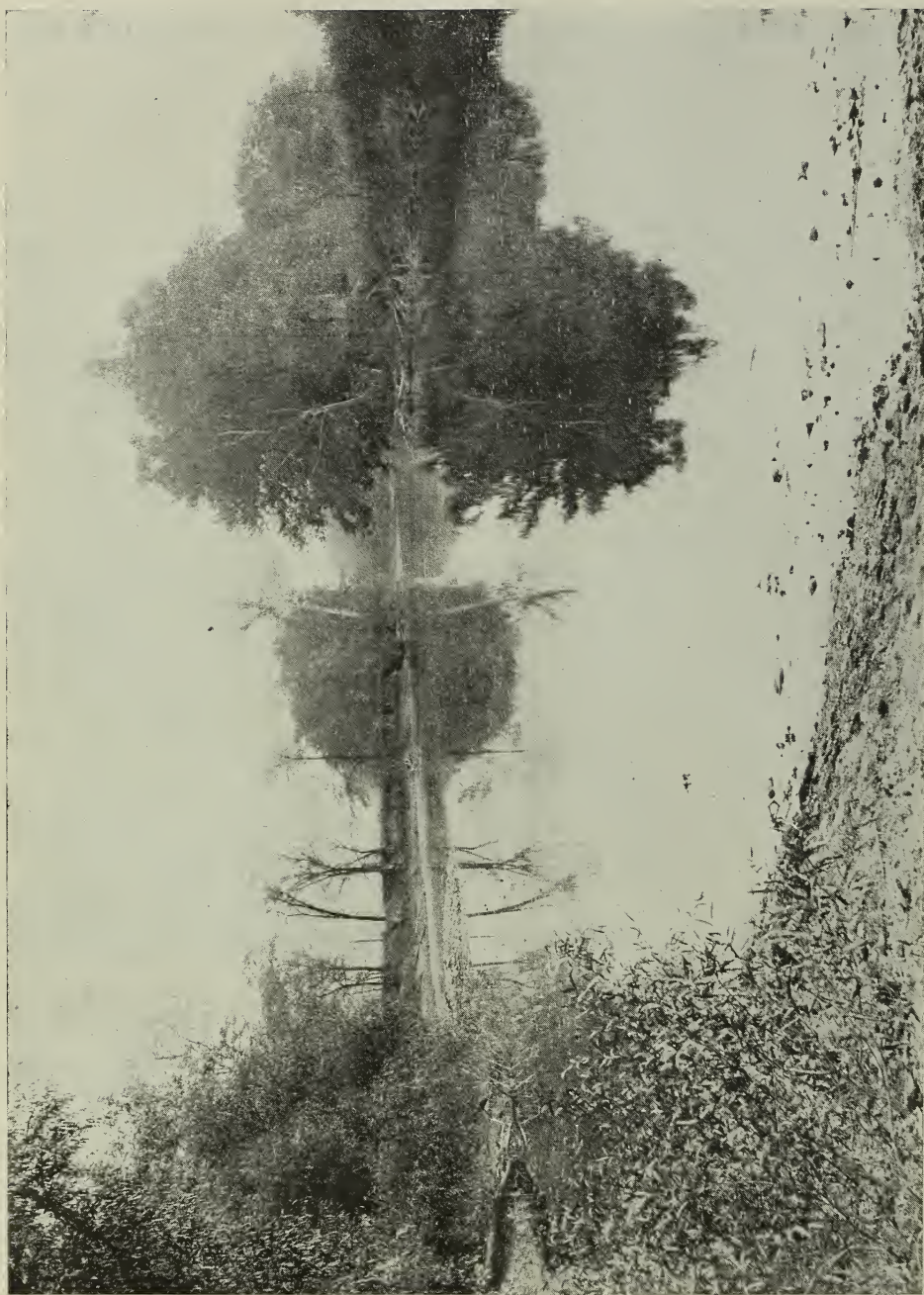
The list of materials required for this silo is given below together with a very liberal estimate of the cost of the same. The silo was built by five farm laborers in thirteen days. As a raise was made each day, the four extra days were spent in framing the forms, digging the pit and building the roof. The owner used gravel from his own farm pit instead of stone and sand.

BILL OF MATERIALS.*

Crushed rock, or screened gravel—40 cu. yds. at \$1.10.....	\$44 00
Sand—20 cu. yds. at \$1.00.....	20 00
Portland cement—54 barrels at \$2.50..	135 00
Reinforcing, 425 pieces of $\frac{3}{8}$ -inch x 10-foot rods—1564 pounds at \$0.024...	39 10
	\$238.10

* Consult local dealers as to prices.

The first cost of concrete silos may or may not be greater than that of the best of any other kind. The time is now at hand when farmers, like railroads and corporations, are considering the lasting qualities of buildings. Concrete silos need no insurance: they do not blow down or burn up. They never have to be painted or repaired. With other kinds of silos during their short lives, the expenses alone equal the first cost. Concrete lasts forever.



ALONG THE OLENTANGY.

What the Editor Wants

SAMUEL R. GUARD, '12
Associate Editor Breeders' Gazette

SAID College Lad: "I know what I shall do—I shall write articles for the papers," and in his excitement he banged his study table with his fist. There was no audience, except himself, which in this case was a good audience. It was far into the night. His lessons for next day he had mentally pronounced "well done" an hour ago. He was sure he could tell the exacting

his favorite farm journal for this last hour, when perhaps he should have been in bed? What had he found? Mostly personal experience. All those things had happened to him or easily might have happened. He had tasted melilotus and found out why the cows did not like it. He had crawled into a pig-tunnel under the strawstack, even when the pigs were inside, and found



"OUR PREXY" AND "OUR GOVERNOR."

toil-and-interest-arousing professor the date of the initial importation and the name of the ship. If perchance his favorite breed were discussed he might be able to rid himself of a pet idea he had hatched yesterday while brooding over some dusty yellowed tomes in that corner of the library sacred to journalistic historical exhibits and to solitude.

But anyhow he would write for the papers. Why, had he not been reading

out that pigs would brook no intrusion by small boys into their strawstack dens and that they had no sense of the fitness of things as they made a wild stampede for the exit, each being careful to plant one forefoot in the eye, the other in the mouth, and both hind feet on the wailing stomach of his juvenile corporosity. Sure, he had broken a colt and lost his temper, and would now unflinchingly advocate kindness

as the colt-breaker's best attribute (but he'd like to see some of the contributors break a horse mule colt). If he had been a little older might not he have gone West and discovered alfalfa just as well or better than this other fellow? Sure. And he would write for the papers.

College Lad was resolved. He said his prayers and jumped into bed. He dreamed of furlongs of galley-proof, at the top of which a dessicated be-whiskered editor was painting his name in plain black pungent smelling printers ink. Far on down the vista of his dream he saw his good gray mares, hitched to a new wagon, drive up under the chute of a corn-criblike structure labelled "Publisher" and a stream of gold dollars rattled down into his 60-bushel wagon-bed. He himself, rode the new spring-seat. When the end gate busted and he hopped down to bolster it up and stop the golden waste, Queen and Duchess started to run—and he woke up.

The next night was the weekly "Night off." College Lad stayed at home and wrote his story. The more he wrote the better he liked it. It will surely "take the rag off the bush," he soliloquized as he mailed it at the corner in time to catch the midnight delivery. It was about "The Theoretical Influence of Hydrostatic Pressure on the Production and Consumption of Feedstuffs." It was a masterpiece. He had carefully noted the facts and figures (the figures would get 'em) in a lecture of the previous week. He whistled as he walked back.

Imagine College Lad's chagrin to have his manuscript returned with one of those already-printed-and-handly editorial letters of "regret as to unsuitability for our purposes." But college lad was farm-reared and a set-back

was no defeat, nor a dozen set-backs. He had learned that trait in teaching brainless calves to practice modern dairy husbandary and grow up on skimmilk.

College Lad tried again. Again the big editor did not appreciate his high-class material. One night he read in the paper about a woman who lived on a prairie farm far out west. Every week for two years she wrote a story and every week drove ten miles to the postoffice and mailed it to the editor of a great magazine. Just as regularly for the two years she each week found in her box the returned story of the week previous. Then one week in her third year of literary striving her story was not returned. Instead came a letter of acceptance from the editor, with some sweet post-script lines. After that her stories came to be regularly accepted. Now she is a famous writer. She had two years of priceless schooling. Maybe she had taught calves to drink also, and had read the book of Job.

College Lad was determined now, and plugged away. In not many weeks an extract from a lengthy submitted article was published over his signature. His joy was unconfined. But of vastly more moment, the editor wrote him a personal letter. He was not a feather-duster editor, College Lad thought. He did not bandy words. He told College Lad what was the matter with his articles and what he could do to make them acceptable. After that College Lad had many stories accepted.

All that was many years ago. College Lad's productions are sought after now. College Lad has been an editor for a long time. After his many years of experience both at writing and editing he should know what an editor

wants. But he says he can not tell. Perhaps he has a trade secret and will not tell. He might or might not think like unto the following:

Strange as it may seem most editors are human. This may be a moot point with many but from the editor's own viewpoint it is absolutely settled. Of course whatever the blue pencil eliminates the contributor afterwards confides to his friends was the sine qua non of his article. But despite the fact that the editor always strikes out the wrong words and inserts worse ones he is human. Always in a tight place he hides behind the printer, an intensely human attribute. His humanity has all to do with what the editor wants. He wants human words, human sentences, human ideas, human stories.

The editor being a quasi-public utility wants what the public wants. Like most humans, the editor seldom gets just what he does want. It is probably true that he usually wants too much, a perfectly human attribute. He wants to escape proof-reading, he wants riches, he wants ideal environment, he wants assistants as good as himself, he wants the friendship of everybody, he wants to go to heaven. Seldom does he get all of these, frequently none at all.

Success at authorship is a matter of personality. All personalities are interesting if we can but get the proper viewpoint. For that reason it is not the subject, but what the author projects into the subject which counts. Yet the beginner undoubtedly has a wedge to enter the good graces of the editor in a happy choice of subjects. But who shall say what are the best subjects. They must tell of human life or something of interest to human life, in order to strike the most popular chord. Angels are still of interest to some living on this mundane sphere,

tumble-bugs to others, edge-drop corn planters to others and baby incubators to others.

Style is important. Yet the non-conformists seem to have as good luck as the most orthodox followers-after. Clearness is the principal thing. Above all things get clearness. Simplicity is a golden attribute, and usually to be obtained by overmuch sluicing.

Orderly arrangement is to composition what leather lines are to good equestrian driving. The editor usually sees the plan underlying the acceptable manuscript. If the writer has not consciously or unconsciously worked out the theme by plan and with a logical coordination of parts he is editorially praised as having no good in him.

When one has something to write he will find a way to write it. Most writers are not born, they grow, that is, they grow into something to say. The vehicle of expression comes, in school or out, most often, in. And that is just what the editor wants, those things that souls really have in them to say.

The editor wants meat. He does not want to read chapters to get a sentence of thought. He is no thresherman and the best editors do not bag the calf. They let it go to the strawstacklike waste basket along with the wind that helps to wrest it from the kernels of truth. To be brief is advice few can swallow, especially the physicians who prescribe it. It is of primal importance however, in these days.

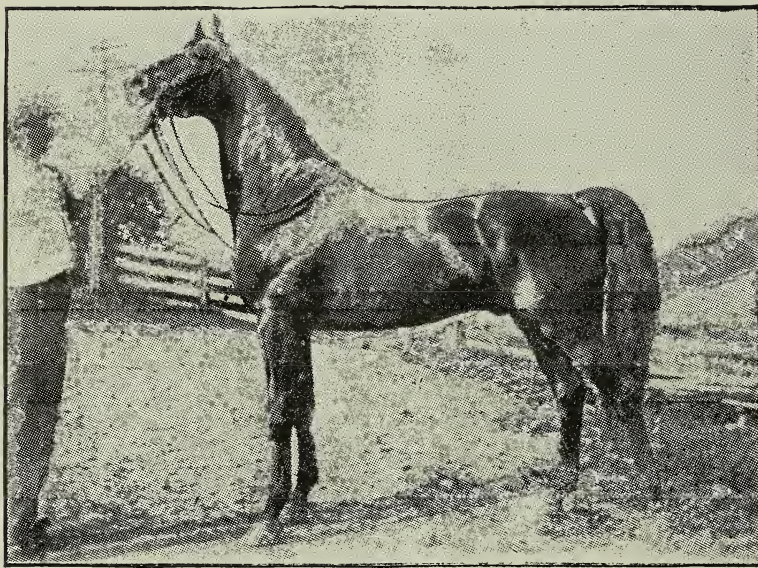
Agricultural college men who can not produce what the editor wants had best matriculate at the beginning again. They are not in good standing in the great school of life. The first trial is never a criterion, never a finish.

To the visioned plow-boy, in the fur-

row or in the college, Life is country life, Modern Man is the country man. When Walt Whitman, fierce, majestic, modern man sinking his quick pen-plummet to the quick of naked nature, worded a desire of his own mission, it was:

“Of Life immense in passion, pulse,
and power,
Cheerful for freest action form’d un-
der the laws divine,
The Modern Man I sing.”

Who thinks those lines through and writes, will produce what the editor wants.



“Stand, Bayard, stand!”
The steed obeyed,
With arching neck and bended head,
And glancing eye, and quivering ear,
As if he loved his lord to hear.



OF

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COLUMBUS, OHIO, JUNE, 1913.

Editorial

"A thing of beauty is a joy forever." The person who first made this remark must have had in mind some natural scenery, dotted with flowers and covered with Nature's green carpet of grass, the whole shaded here and there with trees of different kinds, shapes and hues. Can a prettier spot be found than our own Ohio State Campus? Yet it is thoughtlessly marred by student, facultyman, and official. Why not all join together and preserve the naturalness of the Campus and relate it to the buildings we must have.

There is nothing more artistic or so beautiful as our own Campus covered with the clumps of trees, shrubs and flowers, neither can there be a greater eye sore to the sons and daughters of Ohio State than to see it cut up and spoiled by useless paths and walks.

The idea of the Campus Conservation Congress is certainly good. Let every friend, every alumnus and student join together and boost the Campus Beautiful—your own Ohio State, may it not suffer longer at the hands of thoughtless and careless people.

Our Seniors must soon say Good-bye to their Alma Mater and go from the college halls to the fields and farms. **OUR GRADUATES.** They must lay down the books, the labora-

tory apparatus, the pencils and pens to take up the tools of new and larger tasks. Soon the last lesson will be prepared, the last exam will be over and they must bid farewell to friends and associates, to classmates and professors, to college halls and friendly scenes. It is indeed with sadness that we say farewell, yet it is with God-speed we wish them on their way.

Farewells must be said, old friends must part, and, though often it is hard to break away, there is also a feeling of power stored up, of energy confined, of dreams to be fulfilled, of ambitions to be realized—yes, there seems to be an inward voice that cries to be set free. So after all, it is with pleasure that the graduate goes forth to take his place in the great maelstrom of life's busy whirl.

This year's class is the largest that ever graduated from the Agricultural College. For four years they have labored in preparation for just this event—the granting of the diploma. As the Seniors leave their Alma Mater, may the lessons they have learned here be long remembered, may the breadth of outlook grow broader, and may the visions of power be fulfilled. Right well might they remember that famous quotation from Hubbard, "If a man write a better book, preach a better sermon, or make a better mouse trap than his neighbor, though he may build his house in the woods, the world will make a beaten path to his door."

Early this spring an Ohio State man was introduced, by a friend, to one of Ohio's practical

OUR SHOWS. farmers. This friend remarked that the

Ohio State man was an agricultural student, when the farmer replied, "Yes, knows the theoretical, I suppose, but not the practical." We can well hurl back at all such the remark that—at Ohio State the theoretical and the practical meet. If the agricultural course needed any justification whatever it could easily be found in the

successful manner in which the college shows have been managed this year.

The Ohio State men might well be pardoned if they boast of the four most praiseworthy shows that have been held here. The first was the show of live stock in the Judging Pavilion, just previous to the International. Then the Apple Show followed, Dec. 5-6, when the choicest of Ohio's fruit was on display. The "Battle of the Kernels," Jan. 9-10, proclaimed the wonderful fertility of Ohio's fields. However, the crowning point—the cap sheaf of all—was the Horse Show.

Four shows of such high merit and so excellently managed, and principally by the students, certainly indicate to the most casual observer that the work being done here is of a very high order. When students can carry on successfully shows that deal with the different phases of agriculture, horticulture and live stock, it speaks volumes for their native ability and their training. If you hear some one finding fault ask him what he is doing. See if he is in a position to offer criticism. Most often those finding fault are doing the least to improve conditions.

Would it not be ideal if every man in the Agricultural College was a member and booster of one of the college societies? The man who misses the opportunity of belonging to one of them and of taking part in one of these shows is certainly suffering a vital loss in his education. The men who have managed them during this school year certainly deserve great praise for their skill and ability. Now let every man get in line, press forward and plan for even larger and better shows next year.

Soon the last examination paper will be handed in—and what then?

THE SUMMER VACATION How shall the summer vacation be spent? Shall the student go camping, traveling, visiting, or just return to the old homestead? The man whose finances are running low must be looking for some means of replenishing his store of coin.

The student who is able to travel is indeed fortunate if he exercises his opportunities as he should. There is no schooling that will quite finish a man off as a trip either through our own or to some foreign country. Too, the student who spends the summer canvassing gets a certain kind of

experience that he will not secure in any other way. After all is there any better place to go than right back home? You have been away all year, perhaps for the first time. Mother delights in having her boy back again. She cannot think of him as a man but as her blue eyed boy that first started to the district school. Go home if you can. Perhaps after you graduate you will not be able to return home, but will go to other fields of endeavor.

Remember, wherever you go to fit your life in with the life you find there. Imbibe the good things of the people with whom you associate and impart to them some of the things you have experienced. Be one of them yet be your natural self and withal remem-



THE STAFF, 1912-13.

Standing—Spanton, Phillips, Baker, Walker, Henceroth, Hoftzyer, Crane, Schnell.
Sitting—Henderson, Williams, Kile, Jordan.

ber the saying of the old college president, "Young gentlemen, remember you are sons of Ohio State."

Again Ohio State has come to the front with a new combined five-year

THE NEW ARTS—

AG. COURSE

Arts and Agriculture course. For the first three years the student will be enrolled in the Arts College and the last two years in the College of Agriculture. The A. B. degree will be granted at the end of the fourth year and the B. Sc. of Agr. at the end of the fifth year. This is an

excellent course for those planning to teach Agriculture or for any one who expects to enter the employ of the United States Government. Any one taking this course ought to be better prepared for teaching or for carrying on any line of investigation that relates to Agriculture. It is also planned for those that wish to remain at their home college for three years. When they enter Ohio State the work they have taken in their home college will fit in very well with the course here. A similar five year course is arranged for the Home-Economics Department. This is one more step forward and upward.

And what is so rare as a day in June?

Then, if ever, come perfect days;

Then Heaven tries earth if it be in tune

And over it softly her warm ear lays.

* * * * *

We may shut our eyes but we cannot help knowing

That skies are clear and grass is growing;

The breeze comes whispering in our ear,

That dandelions are blossoming near,

That maize has sprouted, that streams are flowing,

That the river is bluer than the sky,

That the robin is plastering his house near by.

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SPECIAL



THE HORSE SHOW.

One of the biggest events of the year in the Agricultural College was the second annual Horse Show given under the auspices of the Saddle and Sirloin Club in the natural amphitheatre on the campus, May 17th. There were fifteen classes with over fifty horses shown varying from two in the stallion class to nine in the ladies' mounts. The largest entries were made by R.

to the winners by R. Q. Smith, President of the club. The other prize winners were awarded ribbons.

The judges were Donald Acklin, of Perrysville; Prof. D. J. Kays, of the Animal Husbandry Department, and Captain E. M. Leary, of the Columbus Barracks.

There was an additional class this year including Shetland ponies. Much interest was shown by the younger



EMINENCE CHIEF, WINNER OF SILVER CUP IN GAITED STALLION CLASS.

M. Ritter, George Booth, Dr. Brown, and Mitchell's Riding Academy.

The best horses of Columbus were shown and in all the classes competition was keen. Silver cups were awarded as first prizes in fourteen classes. Two of these were donated by the Freshman class in Animal Husbandry, one by Wm. Neil, one by Donald Acklin, and one by the Columbus Riding Club. The cups were presented

people in their pets. Another special feature was an exhibition of High School by "Her Ladyship," ridden by Mr. H. E. Donovan.

Much interest was shown by the down town people who made the show a great success both this year and last in cooperating with the Saddle and Sirloin Club. The success of this show is commendable to the club and to the University. The appreciation of the

show was manifest in the large attendance and the expression of admiration in every feature. The show this year exceeded the former one in popularity, so let us help in boosting those to come.

L. L. Rummell.

Three faculty members from the Agricultural College are to be away next year on leave of absence. They are Miss Ruth Wardall, of the Department of Domestic Science; Prof. Charles S. Plumb, from the Department of Animal Husbandry, and Mr. George Livingston, of the Department of Agronomy. Miss Wardall expects to spend the year in the pursuance of future study along the lines of nutrition and physiological chemistry under Dr. Lafayette Mendell of Yale University. Prof. Plumb is to leave sometime during the latter part of the summer to spend the year studying agriculture and live stock in European countries, especially in France. Mr. Livingston expects to go to Cornell University to study plant breeding. He will leave soon after examinations this spring to be gone till the opening of school in 1914. These people will be missed from the staff next year, but their going assures the introduction of new ideas and revived enthusiasm when they return.

Professor Firman E. Bear, who has been taking Prof. Vivian's place will leave for the University of Wisconsin where he will work, during the coming year, on his Ph. D degree..

WHAT A FEW OF THE SENIORS WILL DO

R. F. Crim has been elected Agricultural Director in the High School at Slayton, Minn., at \$1,200 per year.

W. E. McComas will take charge of the Agricultural Department in the High School at Dodge Center, Minn., at a salary of \$1100.

Ray Brock will take charge of the Gebhart Lumber Co. at Norma, Tenn.

H. E. Otting will be with the Wilde Evaporated Milk Co., of Marysville, O., this coming year.

H. A. Wise has accepted a good position with the Pope Dairy Co., of Indianapolis.

A. R. Cramer will locate on a farm in western Wyandotte County.

R. M. and F. J. Salter will make the chemical analysis of feeding stuffs for the State Department of Agriculture and take work on their M. A. besides.

F. G. Charles has been appointed manager of the municipal farms of the city of Cincinnati.

F. C. Marshall will return to the home farm at Beaverdam, Ohio.

H. J. Ridge, J. W. Tulloss, T. L. Guyton, R. Jaeger, W. Gage and W. Davis expect to enter the teaching profession.

H. D. Drain will enter the ranks of the teaching profession.

B. A. Schnell will take up County Y. M. C. A. work in Medina County. He will be in charge of boys' work.

D. L. Augenstine will teach High School next year.

WITH THE BREEDER

NOTES OF INTEREST AMONG THE FLOCKS AND HERDS

Spring Farm Pontiac Lass, a five year old Holstein, owned by F. M. Jones, a farmer of Onedia County, N. Y., recently broke the world's record for butter production both for seven and for thirty days. She produced forty-four pounds of butter in seven days and one hundred and seventy-one and five-tenths pounds in thirty days. The previous record was held by Valadessa Scott 2nd. Her record was forty-one and nine-tenths pounds for seven days. The thirty day record is seven pounds ahead of the previous record. The cow was sold a few days ago for \$10,000 to Stevens Bros., of Liverpool, N. Y.

The Argentine Government has recently purchased a number of Berkshires from the Tannebaum Farms, Willoughby, Ohio. These hogs answer the requirements of the breed in regard to type, markings, and uniformity, and for this reason were chosen for the shipment. This shows the large field for good animals and shows also that Ohio can produce them.

The Animal Husbandry department has the loan of a two year old Clydesdale stallion belonging to R. C. McMillian, Hebron, Ind. This stallion was second in his class at the 1912 International, and he is a stallion of uncommonly good legs and feet and is also a splendid mover and actor for a draft horse.

The farmers of Union County, Ohio, are taking up sheep feeding. They have found it a profitable venture and in a small neighborhood there were 5,500 sheep fed last winter. The lambs are purchased in the fall and wintered on rations of silage, corn stover or hay, shelled corn, and some protein concentrates such as cotton-seed meal. The lambs are shorn in April and it is found that the fleeces average about four or five pounds. The manure which is carefully taken care of constitutes a great deal of the profit.

Prof. Plumb is contemplating buying a Jersey and a Shorthorn bull in the near future. He is desirous of communicating with any one who has some good animals for sale. The bulls are to head the Shorthorn and Jersey herds on the University Farm and are also to be used in the class room work. Prof. Plumb intends to purchase these animals before he leaves on his trip across the water.

W. C. Jeffries, of Holmes County, Ohio, is very enthusiastic over cooperative stallion buying but warns farmers against dealing with traveling agents. These agents often exact enormous prices for common or inferior stallions. He urges that the best plan is to first form a company and then visit the dealers who have animals for sale.

ALUMNI WHAT THE BUSY GRADS ARE DOING

Prof. Henry Vaughn, of the Animal Husbandry Department, who is on a leave of absence from the University, was present at the Horse Show held at the University. The evening before the show Prof. Vaughn was the guest of the Saddle and Sirloin Club at a banquet held at the Ohio Union. Next year he will assume the duties as head of the Animal Husbandry Department in the absence of Prof. Plumb who will be abroad.

H. B. McClelland, '10, a former editor of this publication, recently resigned his position in Phoenix, Arizona, and has gone to Colorado where he is engaged in practical farming.

Claude Durham, '12, recently stopped for a short visit to his Alma Mater before taking up his work with the Horticultural Extension Department of Purdue University. Mr. Durham has been sales agent for a large Ohio spray pump house. His territory extended over the middle west.

L. L. Heller, '12, who for the past year has been connected with the Department of Animal Husbandry in Washington, has been transferred to Salt Lake City. He will have charge of a Wool Exhibit and make demonstrations throughout the west.

Albert R. Moist, '08, was a recent visitor on the campus. Mr. Moist for the past three years has been General Manager of the Sheffield Farms, Glendale, Ohio. This place is devoted to dairying and poultry.

E. T. Rinehart, '10, who was con-

nected with the University dairy department is at present located in Idaho. Mr. Rinehart is engaged in dairy farm investigation work. His territory covers the entire state. The work is under the U. S. Department of Agriculture and in connection with this Mr. Rinehart works for the extension department of the University of Idaho, located at Moscow. His permanent headquarters are at Boise, Idaho.

Cha.s. H. Flory, '05, recently sent to the Forestry Department a very complete, historical account of forest fires with various methods of protection. This has not been published yet, having been completed about May 1st. Mr. Flory is located at Portland, Oregon, and is under the U. S. Department of Agriculture.

J. C. Hedge, '12, is at present manager of the Monroe Wetzel Dairy Co., located at New Martinsville, West Virginia.

G. H. Richey, '09, was a visitor last week. Mr. Richey for the past two years has been Dean of the Agricultural work at Ohio Northern. This department operates a small farm for experimental and class purposes.

W. J. Hendrix, '10, is back on the farm and in connection with this he assists in the Extension Department work. The farm is near Bucyrus, Ohio.

V. C. Smith, '12, who has charge of the agricultural work in the La Salle High School, is at present giving two afternoons a week, visiting farmers in that neighborhood. He gives advice

wherever requested. He informs us that much can be accomplished in this way. Mr. Smith also conducts an experimental plot in connection with the high school at LaSalle, Ill.

W. E. McCoy, '12, has recently changed from assisting in the Extension Department to assist in the soil laboratory in the Agronomy Department of the University.

J. C. McNutt, '07, now Prof. of Animal Husbandry and Dairying at the North Carolina Agricultural College, made a visit to the University in the interest of his department. Prof. McNutt was in quest of a man for next year to assist in his work.

O. H. Pollock, '12, who is managing the home farm near Delaware, Ohio, was a recent visitor at the University. He attended the horse show.

Miss Leola Flora, '12, has discontinued her work as instructor in Domestic Science at the city Y. W. C. A., 65 S. Fourth St., Columbus, Ohio, and has returned to Arcanum, her home, where she expects to remain for the summer.

Merton Brown, '11, is teaching in the Logan High School.

E. D. Blaine, '12, a varsity foot ball man, is at present doing advanced registry work for the Dairy Department of the University. Mr. Blaine has been managing a stock farm near Mt. Sterling, Ohio.

Ross Long, who is connected with the White Star Farm, took part in the recent horse show. He spent two years at State.

D. W. West, '05, who is engaged in Y. M. C. A. work in the Central Department of Cleveland, Ohio, was a visitor at the University May 4th, at which time he spoke to the University Y. M. C. A.

R. R. Walker, '12, of Williamsburg, Ohio, was a recent visitor at the Uni-

versity. Mr. Walker was married in May and is at present located near Corsicana, Texas, where he is managing a large estate.

Wm. Stowe Devol, '86, who is known for the great work he did in connection with the Board of Trade of Redland, California, has recently changed positions and is now located in San Luis Obispo. He is associated in similar work.

E. H. McKay, '12, is farming near Wilmington, Ohio. The marriage of Mr. McKay to Miss Ila Haworth took place the past winter. Mr. and Mrs. McKay are graduates of Wilmington College in the class of 1910.

A. E. Taylor, '12, who is employed by the Ohio Experiment Station, has recently been promoted to assistant forester. Mr. Taylor is doing fine work for the station.

M. O. Bugby, '03, who is engaged in farm superintendent work in the north-east district of Ohio is also assisting in the Department of Co-operation, Ohio Experiment Station, Wooster, O.

C. W. Burkett, '95, since leaving the University, has been connected with the New Hampshire, North Carolina and Kansas Experiment Stations. At present he is editor for Orange Judd Publishing Company. Among his publications are many of vital interest to all engaged in agriculture and a few may be mentioned, "Agriculture for Beginners," "The Farmers' Veterinarian," "The Country Life Education Text Books," "Soils," "Farm Crops," and "Our Domestic Animals."

F. J. Boynton, who received a certificate of agriculture in June, 1902, is farming near Haverhill, Ohio.

C. M. Lewis, a "short course man" of the past winter, was recently married and is at present engaged in farming at Wilmington, Ohio.

CURRENT AGRICULTURAL LITERATURE

COMMENTS AND CRITICISMS ON CONTEMPORARY CONTRIBUTIONS

First Principles of Feeding Farm Animals is the title of a new book written by Prof. C. W. Burkett. As the title indicates, the book discusses the first principles of stock feeding. It is one of the best illustrated and most comprehensive books dealing with this important subject. The essence of animal nutrition has been laid down in a clear and simple style and in a very interesting manner. The book is more than a statement of principles; it is an interpretation of the entire science of feeding and will prove to be as captivating to the stockman as it will be to the student. Orange Judd Co. Cloth, net, \$1.50.

The Principles of Vegetable Gardening is a recent book written by Dean L. H. Bailey, of Cornell University. In it, the several phases of this important subject are thoroughly discussed. The great amount of experience which Prof. Bailey has had enables him to treat this subject in such a manner that the beginner will find no trouble following the principles laid down in the book. MacMillan Co., New York. Cloth \$1.50.

Messrs. D. D. Mayne and K. S. Hatch have written a book entitled "**High School Agriculture.**" It is intended to serve as a guide to the teaching of Agriculture in High Schools. It treats in a brief and elementary way of Soil Fertility and Fertilizers, Agri-

cultural Botany, Economic Plants, Insects and Diseases, Farm Animals, Feeds and Feeding and Farm Management. It undoubtedly contains many ideas for older heads as well as for the younger. 432 pages, illustrated. The American Book Co. Price \$1.

Much has been written in the last few years on the Agricultural resources of this country. Among the late books dealing with the subject is "**The Farmer of Tomorrow,**" by Mr. Frederick Irving Anderson. He has brought together here, our resources both in farming area and soil fertility. Much space is devoted to the hypothesis that our soils are inexhaustible, although they may be considerably impaired by unjudicious management, as opposed to the old hypothesis advanced by Liebig years ago. 308 pages. The MacMillan Co. \$1.50 net.

"**How to Keep Hens for Profit**" is the name of a book by Mr. C. S. Valentine. In it, the American class of fowls is dealt with exclusively. The author discusses in a popular manner the methods of management, treatment of the common diseases, improvement, and the general status of the poultry industry. 298 pages. The MacMillan Co. 50c net.

Those interested in bees will find instructive and interesting reading in "**How to Keep Bees for Profit,**" by

Dr. Everett Lyon, Ph. D. In a popular way he has discussed all phases of bee keeping including habits, methods of management, queen rearing, production of comb and extracted honey, sources of honey, bee diseases, recipes, etc. 329 pages. The MacMillan Co. 50 cents net.

The Country Church and Community Cooperation is the title of a book recently published under the name of Henry Israel, Editor of Rural Manhood. The book consists of chapters written by the leading rural educators of the country. It is specific and is a study of the problems of country life as seen through the keen eyes of these men. Association Press, New York. \$1.00 net.

Drainage is always an interesting and vital subject. Mr. W. C. Davidson has an article in **Hoard's Dairymen** for May 9, on "The Drainage of Farm Lands." Besides giving late methods and machinery, he has considered the home made concrete tile with their comparative cost. This is an important subject for one who has much of this work to be done.

The Rural New Yorker for May 10 has an article on "The Fertilizing of Apple Orchards," by Mr. F. H. Ballou of the Ohio Experiment Station. In his discussion, and by illustration, he has shown what remarkable gains have been secured in southern Ohio by the use of nitrogen in addition to the other elements of plant food.

Mr. C. L. Gooding, of Pennsylvania State Agriculture College, has an article in **The American Agriculturist**

for May 3, on "Effective Management in the Hay Field." He has shown by a table when the different kinds of hay contain the most digestible nutrients, and when they give the heaviest yields. He also gives his ideas on the best way of handling hay at harvest time.

Sanitation and later farming methods have been demanding a better way for the disposal of sewage on the farm. The septic tank seems to have solved the problem. In the May number of **Country Life in America**, Mr. W. C. Davidson has an article, "Making Filth Eat Itself Up." The processes involved are discussed and two different tanks are described in detail with drawings and estimates on the cost of each. A rather extensive bibliography is given at the end for those who are interested in a more extensive study of the subject.

Those who have an automobile or gasoline engine will find an interesting and instructive article in the May number of **Country Life in America**, by Harold Whiting Slauson, M. E., entitled, "The Meaning of Horse Power." This article gives several methods of determining horse power in engines, and formulas by which any one can figure the approximate horse power if the specifications of an engine are known.

Dean H. C. Price has written another interesting article which appeared in the **Twentieth Century Farmer** for May 10. It is connected with "Land Mortgage Credit Systems in America." Three possible systems are given, and one is discussed at length giving the drawbacks and advantages as they appear to him.

Secondary Agriculture

Devoted to the Interests of Agricultural Education in High and Common Schools

Theodore Roosevelt has written an excellent article in the Outlook of May 10th on the subject, "The High School and the College." He emphasizes the fact that the college entrance requirements are making it practically impossible for high schools to offer the proper course of study which would tend to create a more useful class of citizens. However, he states, the situation is improving, as many colleges and universities are accepting entrance credits which formerly were not recognized. He takes up in his discussion Bulletin No. 7 which has just been issued by the United States Bureau of Education, and quotes it as follows:

"The high school should in a real sense reflect the major industries of the community which supports it. The high school, as the local educational institution, should reveal to boys and girls the higher possibilities for more efficient service along lines in which their own community is industrially organized."

In concluding his article the Ex-president says, "I believe cultural education comes second, and a long way second, to training along lines of social and industrial usefulness; and, furthermore, I believe that the effort should be made to meet the widely varying individual needs of each individual boy or girl."

This is certainly a timely article. The study of Latin and Greek and German and French certainly does not

"reflect the major industries of the community." The study of all foreign languages is all right in its place and cultural education is not to be decried—but in high schools and common schools their place is distinctly subordinate to rational industrial education. Let those who desire to secure the old classical training go to the institutions of learning where it can be obtained; but let us have a practical course of study in our rural high and common schools that will directly train and assist the boys and girls in the part they will have to play in our industrial world. Thus we will build up a greater and more efficient people.

SCHOOL GARDENS.

School gardening as a phase of practical education is receiving an increasing amount of well merited attention at the hands of those persons particularly associated with child life and interested in its welfare. Experience may be a dear teacher, but it certainly is the best one so far as agricultural education is concerned. The child, who learns by what he actually sees and helps to accomplish, is more than doubly well instructed.

The problem of the utilization of the school garden idea is one which might reasonably be supposed to pertain peculiarly to country or rural schools, but its primary solution at least is being worked out in the schools of our larger cities where the theme of country life

is always an inspiration. And it is in connection with such schools that this branch of education finds peculiar appreciation.

There are, at least, four very important benefits, so far as the children are concerned, in the school garden idea properly worked out. First, it supplies wholesome recreation; secondly, it provides healthful occupation; thirdly, it adds to the store of knowledge; and fourthly, it develops a spirit of friendly competition. All of which are certainly factors of no small moment in the pupil's development.

The results of this work will quite surely be the most effectively attained through the individual plot method, where sufficient space can be secured to permit of such a plan. Each pupil entering upon this class of work should be supplied with an individual plot of not necessarily very extensive size, where he may exercise his skill under such instruction as shall accomplish for the child and his labor the greatest possible results. Such plots must be closely associated in rather large blocks to facilitate instructional work.

The soil should be as uniform in character and fertile in composition as possible and must needs receive initial preparation at the hands of the administrative officers. Ultimately each pupil will be assigned his plot definitely

defined by four stakes (ten by twenty feet is the average size). Then, furnished with suitable tools and seeds, the young agriculturist may proceed to give the finer preparation to the soil, mark out the rows and plant the seeds according to a very carefully prepared plan which must needs be supplied, or in case of larger, better informed children worked out individually with the instructor's assistance.

Such plans will include several of the most adaptable vegetables and flowers, such as onions, beets, beans, cabbage, tomatoes, lettuce, radishes, carrots, peas and sweet corn, petunias, four o'clock, nasturtiums, asters, salvia, cosmos, gladiolus and balsams.

The rows should be twelve to eighteen inches apart, according to the size of the vegetable or flower. The seed should be planted deeply enough to protect them from rapid drying out. Most of the vegetable seeds are planted at least one inch deep, while the smaller flower seeds should be planted less than one-half inch and the soil kept well moistened until the seeds are up. After the plants are up, stir the ground frequently and apply water when needed and in generous amounts, but at not too frequent intervals. Daily shallow watering should be avoided.

L. M. MONTGOMERY,
Horticultural Department.



CITY AND PUBLIC SCHOOL GARDENING.

Vacant lot farming was first started in Columbus by the Fruit and Flower Guild, and, in 1911, was taken over by the Department of Public Recreation and has since been conducted as a phase of the recreation work. What finer, more healthful, uplifting recreation could a person have? After working all day in a hot, dirty shop or over a wash tub, as many of our city farmers do, the very thought of a quiet hour in the evening and a morning at work in their gardens is refreshing. It was mainly for the needy that this work was started in Columbus; but, as the people began to realize the benefits they could receive not only from a financial standpoint but physically and mentally as well, more people began to apply for a place to make a garden. Today not all the people who have vacant lot gardens are in dire circumstances, but many are doing the work for the pleasure they derive from it. There are certain sections in the city where there has grown up a great organized interest in the beauty of the locality. It is this interest, when created by people who are in comfortable circumstances, that will inspire in the hearts of the sluggish and down-trodden charity-seekers the desire and ability to get out and do something to help themselves. No matter how far a man has fallen he still has some spark of pride about him and if he is thrown in with the pride-taking class of people, as he will if he can be interested in vacant lot gardening, there is bound to be a change for the better.

Why does he do this work at first? It has been shown that from the ordinary vacant lot a man can raise vegetables enough, not only to supply the family during the summer and also

part of the winter, but it will bring him a small cash return for his labor.

In other cities where this work is carried on, the people who plant these gardens must help stand the expense of plowing and seeds. In Cleveland the applicant for a garden must pay one dollar the first year. If he cares to plant the second year it will cost him two dollars. This increase is maintained until he has had a garden for five years. From this time on he is compelled to pay five dollars a year for every year he plants a garden which is conducted by the association. In Columbus the conditions are somewhat different. If a person wants a garden and gives his word to tend it properly and at the end of the season to make a report of all the produce he has grown, he is given a garden free of charge. This garden is plowed and seeds enough to plant are furnished by the department. If the garden is properly tended, the next year he will have no trouble in obtaining another similar offer; but if it is neglected one year, he will not obtain a garden so readily the next year.

Vacant lot farming reaches only the adults, so in 1911 we started the children's gardens. These gardens are laid off in plots ten feet by twenty feet with a path one foot wide separating them. They are located as near the school houses as possible, and are in charge of an experienced garden instructor, who makes it his duty to keep a record of everything that happens in the garden. He instructs the children as to why they do certain work in their gardens.

It is no wonder that more children do not enjoy working in their gardens. They are entirely ignorant of why they break up the clods before planting or why they keep the soil loosened after

the little seeds have germinated and pushed through the ground.

The children should know why they do certain tasks. If they know that every time they cut off a weed, they are not only getting rid of a pest and giving the little plant more room in which to grow; but are at the same time breaking up the soil so that more air and heat can get into the tiny roots so that far less moisture can escape, they will not think of their labors as tiresome.

What could anyone teach to a child

the lesson of co-operation which the children will soon learn. They will soon look upon their garden as the one that should make the best showing in the final judging, and they will combine their efforts to accomplish their end. To be sure a great deal depends upon the person in charge. He or she must have a sweet, even disposition, always ready to explain the many problems that will confront the children. It is through the teachers' efforts alone that an organization can be made, to grow up among the children. This



BETTER THAT THE CHILDREN CULTIVATE THE VACANT LOTS THAN TO LOAF IN THE STREETS AND ALLEYS.

during the time he is not in school that would be more uplifting and beneficial than the lesson of how the tiny seed germinates and grows into the plants that we use for food.

There are many other lessons a child may learn while working in the children's gardens, lessons that if well learned, will be of the greatest value to them in after life. There is the lesson of patience and of observation—two qualities that if well rooted in the child will mark the man or woman throughout their life. Then we have

brings up another very important lesson the children must learn and that is the RIGHTS OF OTHERS. Many children are spoiled and it takes them some little time, and, in many cases, a much longer time to learn that some one besides themselves have certain rights. All of the lessons that are taught and the good health gained by garden work must surely emphasize the dignity and nobility of intelligent labor.

JOHN SCATTERDAY,
Supervisor of City and Public School
Gardens, Columbus, Ohio.

THE BOY AND THE SEASONS.

William L. Graves.

In Spring, although the sky is blue,
And all the world looks clean and new,
I wish the summer days were here,
The finest time of all the year.
I want to put my books away
And go bare-footed in my play;
I want to find a swimming pool,
And dive into its shadows cool.

When Summer comes I wish for Fall;
That seems to me the best of all.
Then grapes get ripe, and overhead
The maple leaves are gold and red;
The hickory nuts come rattling down,
And then on every gate in town
The grinning jack-o'-lanterns stand,
To show that Hallow E'en's at hand.

But when the Autumn's really here
I wish that Winter time were near;
For O, I love the whirling snow,
The winds that sting me as they blow!
I love across the ice to fly
Until the moon is climbing high;
And when of outdoor things I tire,
I like to read before the fire.

I'm not content with anything—
In Winter time I wish for Spring.
I want to see the grass come green
Where January snow has been;
I want to hear the bluebird call
And see the flags rise straight and tall;
To watch our lilac bush grow white,
And hear it raining in the night.

My mother says I ought to be
A swallow sailing high and free.
Then I could fly to east or west
And seek the place to please me best;
Fly south or north on slanting wing,
Thro' changing climes go hastening,
To find the Spring in Autumn time
Or Winter at the Summer's prime!



New Notes

The crops for last year at the University Farm were a great success in acreage. Following are the amounts obtained: 5,600 bushels of corn, 300 tons of silage, 18 tons of roots, 100 bushels of Soy beans, 20 tons of oat hay, 23 tons of alfalfa, 11 tons of Soy beans, 31 tons of sorghum, 31 tons of wheat, 17 tons of clover hay, 28 tons of timothy hay, 2,000 shocks of fodder. This coming year the following amounts will be planted. 110 acres of corn, 12 acres of potatoes, 35 acres of alfalfa, 25 acres of oats, 15 acres of wheat, 15 acres of timothy and clover, 35 acres of soy beans, and five acres of oats and Canadian peas.

This year's outlook for a good fruit crop is anything but encouraging at the present. The early frosts did quite a bit of damage, but the recent hard freeze did the most damage. Most of the early apples except those on very high ground with good air drainage or near the lake were for the most part killed. Some of the later blooming varieties as the Rome Beauty were not so generally killed. The small fruits were badly damaged such as cherries, blackberries, raspberries and strawberries. The currents and goosberries were not injured to any great extent. In the orchards around Columbus the fruit was all more or less damaged.

Prof. F. S. Jacoby, of the Poultry Department, will be married to Miss Ruth MacManamy at the home of the bride's parents in Circleville, Ohio, on June the first. The wedding will be a family affair and only a few of the close friends of both the bride and groom will be present. Miss Silva McManamy, the sister of the bride, will act as bridesmaid and Prof. Donald Kays will be the best man. After the ceremony the couple will leave for Prof. Jacoby's home at Ithaca, N. Y., where they will remain a short time and then leave to spend the summer in the west where he will spend part of his time in investigating the poultry conditions.

Mr. R. R. Jeffries, Student Assistant in Horticulture, has just accepted a fine position in the Extension Department of the University of West Virginia. He will leave the first of June to take up his new work which will consist of Extension work and teaching in the University.

In every township in 32 counties there is an organization for the Corn contest this year. Last year there was \$15,000 raised by these organizations to send the winners to Washington. This year Secretary Sandles expects this to be doubled.

It is interesting to note the unusual demand for students to do work in Horticulture this spring. The Department was unable to supply the demand for students to do pruning, spraying, and planting of orchards and vineyards. This is very encouraging to both the Department and students as it shows the increased interest that is being taken in this line of work and also that the public is coming to recognize the importance of having men do this work that have special training.

The new tract of land recently acquired by the University west of the poultry plant has been planted to orchard, mostly apples. There are over 100 different varieties of fruit. It is the purpose of the Horticultural Department to use this as a laboratory where the students will do all the pruning, spraying and cultivating. This will give the students an opportunity to get practical experience in scientific orcharding.

Prof. Davis, of the Horticulture Department, has been offered the position of Head of the Horticulture Department in the Agricultural School and Experiment Station of Maine. The offer comes as a surprise through the recommendation of Dr. True of the Bureau of Horticulture, Washington. We understand that Prof. Davis is not going to accept.

The senior Foresters made an inspection trip to the Mead Pulp and Paper Co. at Chillicothe. They were very much interested in the 250 acre tract planted in Cotton Wood to supply pulp for the mill. This is something entirely new, as most people usually think of the Cotton Wood as being worthless.

"The growth and progress of agriculture have been the greatest agents for prosperity that the country has ever had." So said Secretary of State W. J. Bryan, as he turned the first spadeful of earth for the building of the Palace of Agriculture for the Panama International Exposition, which will open at San Francisco on February 20th, 1915. Without a doubt this will be the grandest display of the Agricultural world ever seen in this country and will be watched with great interest.

In the University gardens they are going to run some extensive variety tests of sweet corn, cucumbers, beets, tomatoes, lettuce and pumpkins. The test of tomatoes will be the most extensive. There will be 240 different lots made of 30 varieties. 10 plants of each will be tested for earliness, quality, and number of fruit, disease resistance, and the nature of the plants. Exact data will be kept of each one.

H. M. Hopkins, a member of the class of '14, has left the University to establish a dairy on his father's farm. While in school Mr. Hopkins was very much interested in the production of butter and will probably go into that phase of Dairying.

The Underwood tariff bill passed the House recently by a vote of 281 to 139. The following day it was introduced into the Senate and has been the cause of much fighting since then. What effect this bill has on the American farmer remains to be seen. If we have free trade, the farmer wants to buy in a free market. What he kicks on is to sell in a free market and purchase protected goods.

A campaign is now in progress to promote a more extensive growth of Alfalfa in this and other states. Enthusiasts are traveling about in automobiles and visiting farmers of different sections in the endeavor to secure their interest. Over six thousand people were addressed during four days of campaigning in the northwestern portion of this state. On May 28th a great mass meeting is to be held at Woodland Farm, owned by Wing Brothers, at Mechanicsburg, O. An Ohio Alfalfa Growers' Association will probably be organized at that time. Every grower of Alfalfa in the state should attend. A number of prominent men will be present to speak.

At a recent editorial convention a preacher offered the following toast: "To save an editor from starvation take his paper and pay for it promptly. To save him from bankruptcy, advertise in his paper liberally. To save him from despair, send him every item of news you can get hold of. To save him from profanity, write your correspondence plainly on one side of the sheet and send it in as soon as possible. To save him from mistakes, bury him—dead people are the only ones who never make mistakes."

Eighty-five spraying exhibitions were carried on by the Extension Department during the past two months. These demonstrations were practiced in nearly every county in Ohio. In all places large crowds were in attendance and great interest was manifested.

Prof. Paddock will leave for Pueblo, Colorado, in a few days where he has been subpoenaed as a witness before the U. S. District Court.

The Dairy students of Purdue University visited the University the middle of last month. They inspected the Dairy laboratories and other facilities of the department. They passed favorable comment on the work carried on and went home very well pleased. While in Columbus they were the guests of the West Jefferson Milk Co. and the Hartman Farm, visiting both the above places. Our Dairy students gave them a banquet at the Ohio Union the evening they were at the University and a general good time was enjoyed by all.

Prof. A. B. Graham will speak at a State Conference on Agriculture and Country Life in Indiana on June 3-4. This meeting will be held at Indianapolis under the auspices of the Indiana Bankers Association. Prof. Graham will speak on "Educating Boys and Girls for Country Life." The object of this conference is to expand the farm resources of Indiana.

About 100 students will visit the Ohio Experiment Station at Wooster, on June 6. Profs. A. G. McCall and F. E. Bear will be in charge. All who can possibly arrange to go on this trip should do so as the trip will be a very interesting and instructional one. At that time the growth of the crops will be well under way and results will be very noticeable.

The Poultry Department has moved several of their colony houses to the orchard across the river. In this place Prof. Jacoby intends to raise the young chickens and bring them to maturity. "It is an ideal spot, said Prof. Jacoby and will be mutually beneficial both to the chickens and to the orchard."

Three of the four men who are in the apprentice course of Animal Husbandry will spend the next year on live stock farms. Merle D. Simpson will go to Ayshire Farm of Mr. John Sherwin at Willoughby. Waylend Hunt will spend the coming year on the Hood Farm at Lowell, Mass. W. W. Rummell will go to the farm of Mr. Chas. L. Hill, at Rosendale, Wis.

The Experiment Station at Wooster recently obtained a lease of 170 acres adjoining the present farm on the east. This makes a total of 640 acres available for work and will do much to relieve the present congestion

The annual wheat field day will be held at the Experiment Station on June 20. Several prominent Agricultural educators of Ohio will speak at this meeting.

The students in the Forestry Department are securing work for this summer very readily.

TOWNSHEND LITERARY SOCIETY

Last week Townshend had a diversion from their regular program in the way of extemporaneous speaking. Twenty-five members were present. Each was given a chance to appear on the program and speak without previous preparation. The idea proved very successful and the meeting was one of the most interesting of this semester.

OHIO'S FAMOUS COWS.

Ohio has an unquestionable right to be proud of her high producing dairy cows, for they are not only champions of Ohio but also of the world.

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High Lawn Hartog De Kol has a record of 25,592.5 pounds of milk and 998.34 pounds of butter fat.

These cows, all of the Holstein-Friesian breed, are owned by Dan Dimmick & Bro., proprietors of the Maplecrest farm, East Claridon, Ohio. They have so far reared all heifer calves, making possible the development of a high producing strain of cattle.

Spottswood Daisy Pearl, the champion Guernsey cow of the world, is owned by O. C. Barber, proprietor of the Anna Dean farm, Barberton, Ohio. Her record is 957.38 pounds of butter fat.

Time and space does not permit a detailed account of the many cows that are being tested throughout the state or how or what these cows are fed and the kind of treatment they receive. However, it may be inferred that Ohio will continue to hold her record as a dairy state and that in the future she will produce cows with records equal and even greater than those of the present time.

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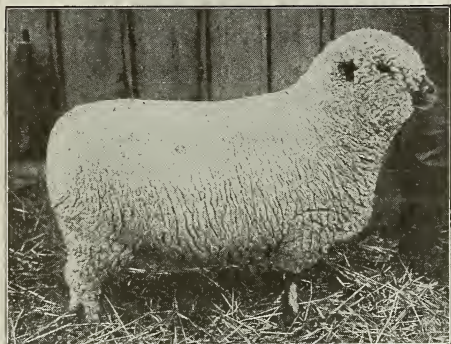
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 A-13
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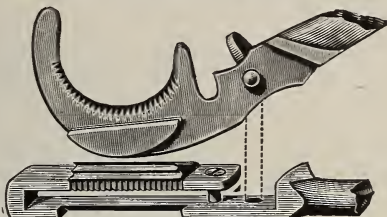
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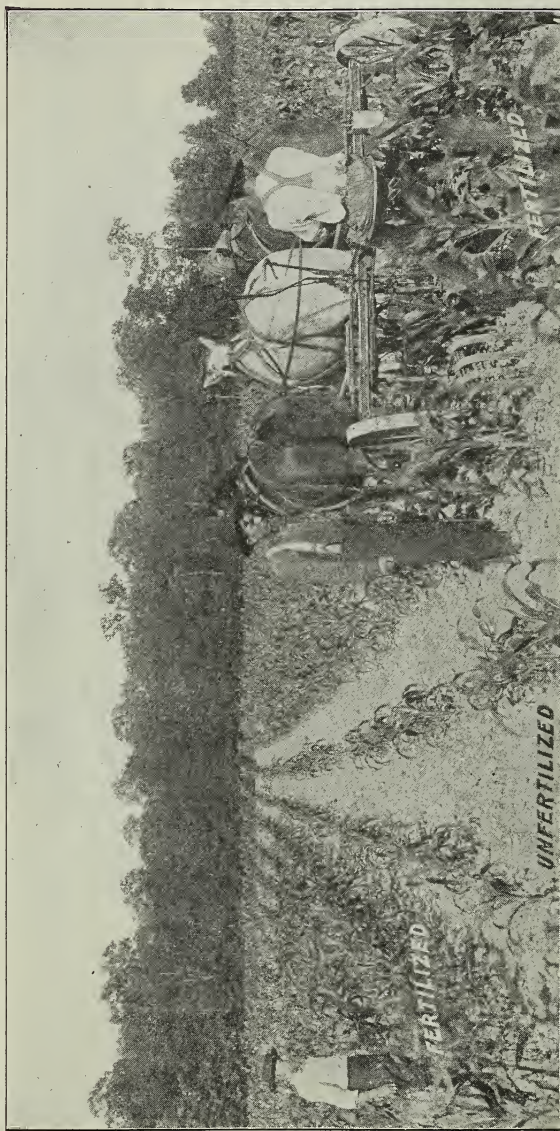
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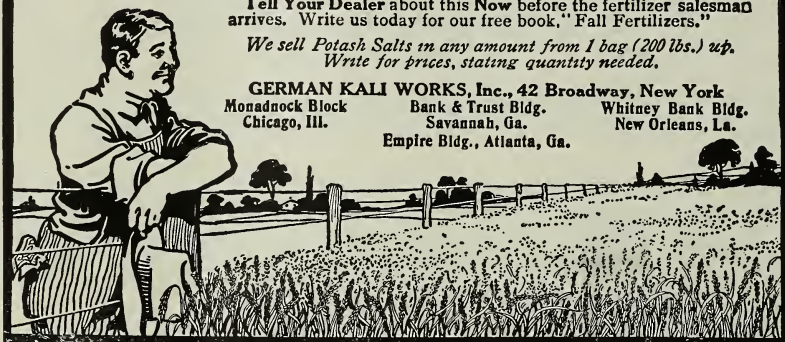
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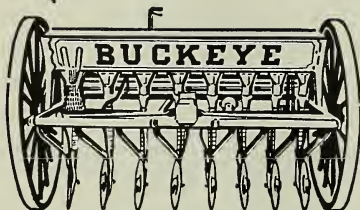
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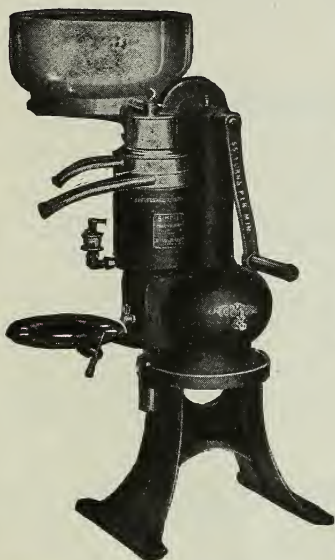
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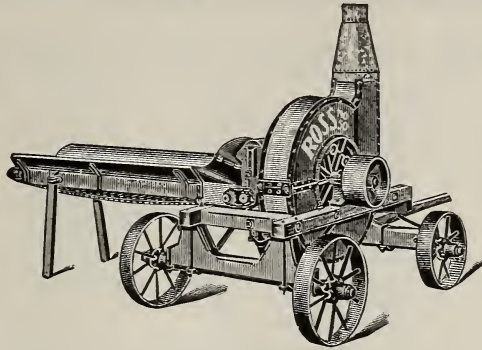
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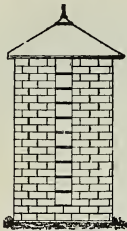
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Fig. 1345

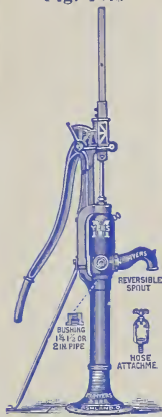


Fig. 1287

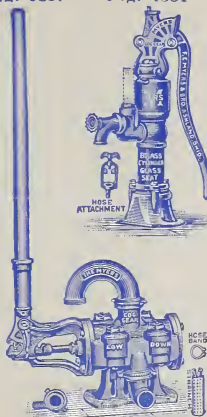


Fig. 1384

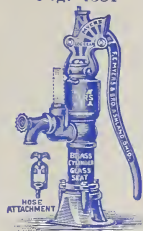


Fig. 1160



Fig. 333

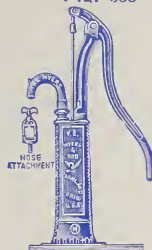


Fig. 1138

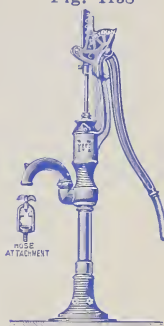


Fig. 513

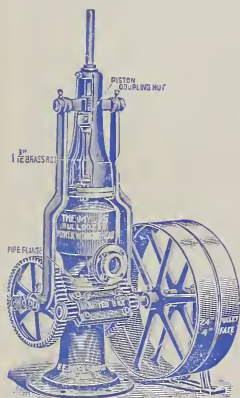
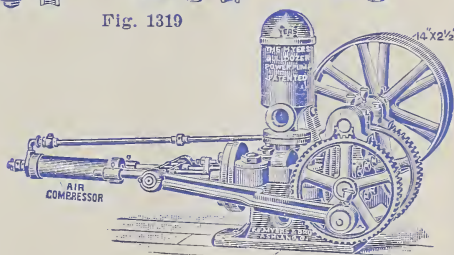


Fig. 1319



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